

Issues in the public acceptability of new food technologies

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- Emerging methods
- Future research needs



Traditional Approach to Risk Analysis



Risk
Assessment



Risk
Management



Risk
Communication



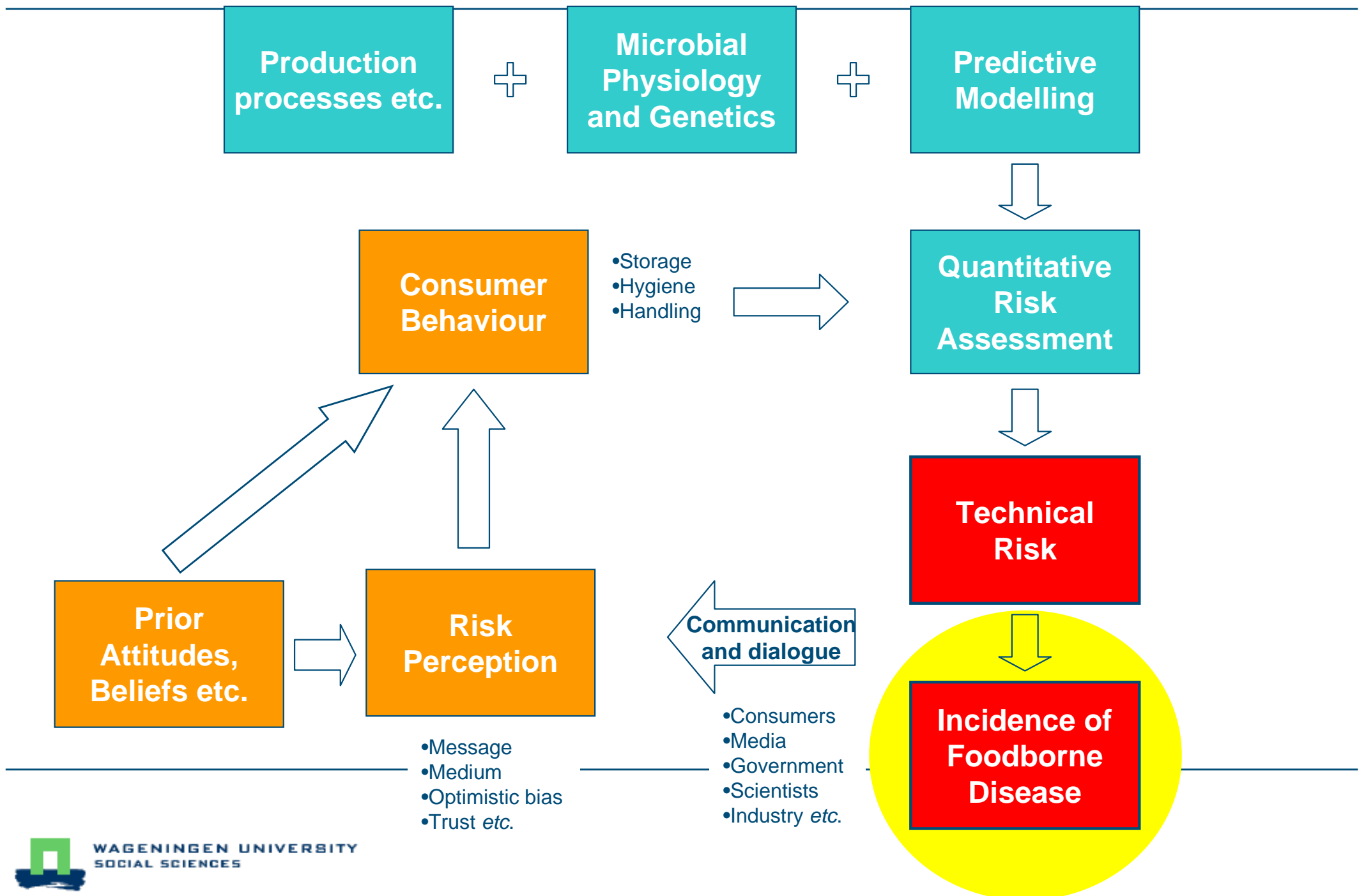
Risk Communication in Risk Analysis

- Improving the transparency and interaction between the three components of risk analysis ...
- ... to increase consumer trust and confidence in food safety and risk management



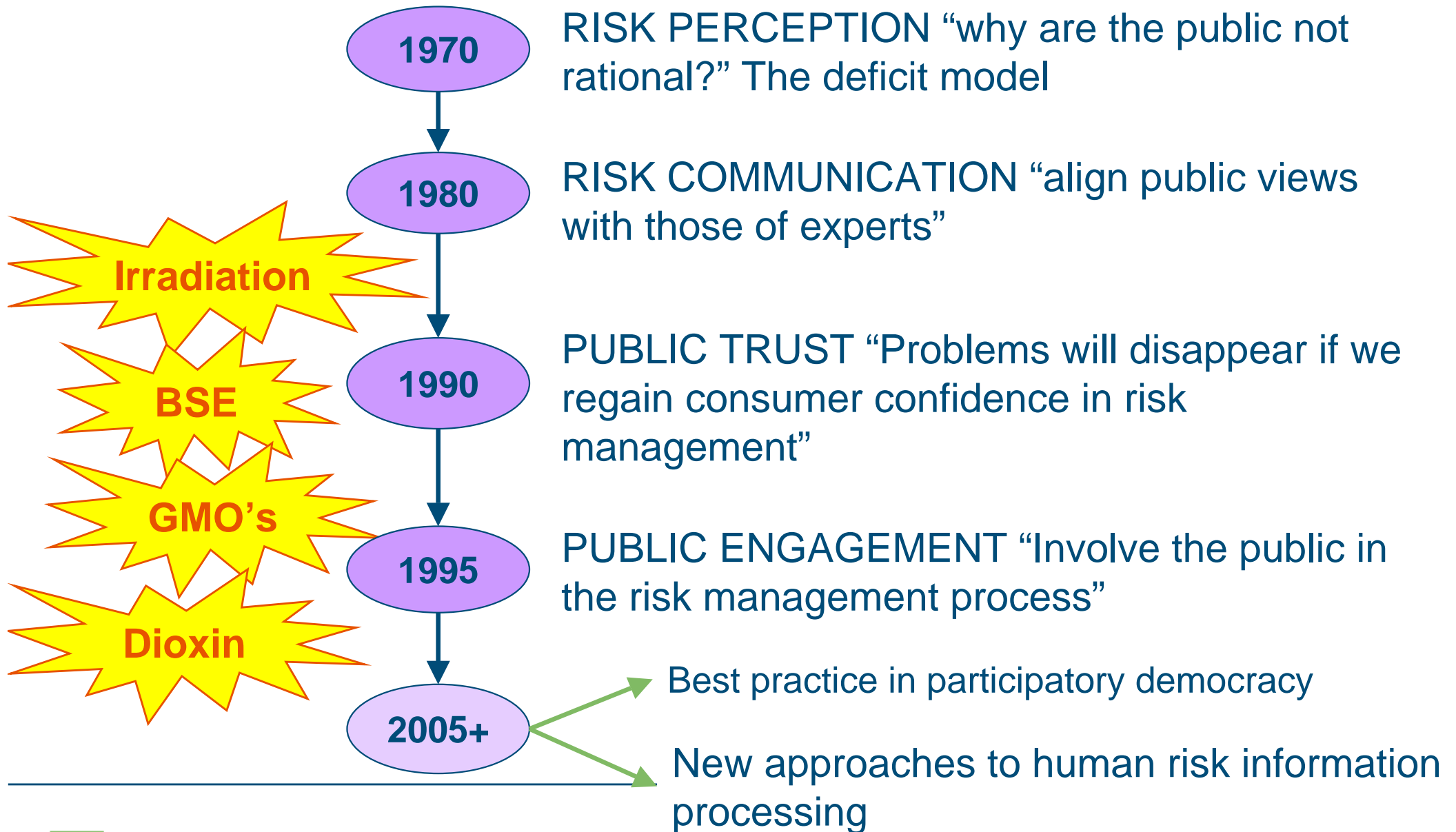
Based on WHO 1998;
(Frewer & Salter, in press)

Natural-Social science interaction



Trying to Build Public Confidence in Risk Analysis –

A Recent History

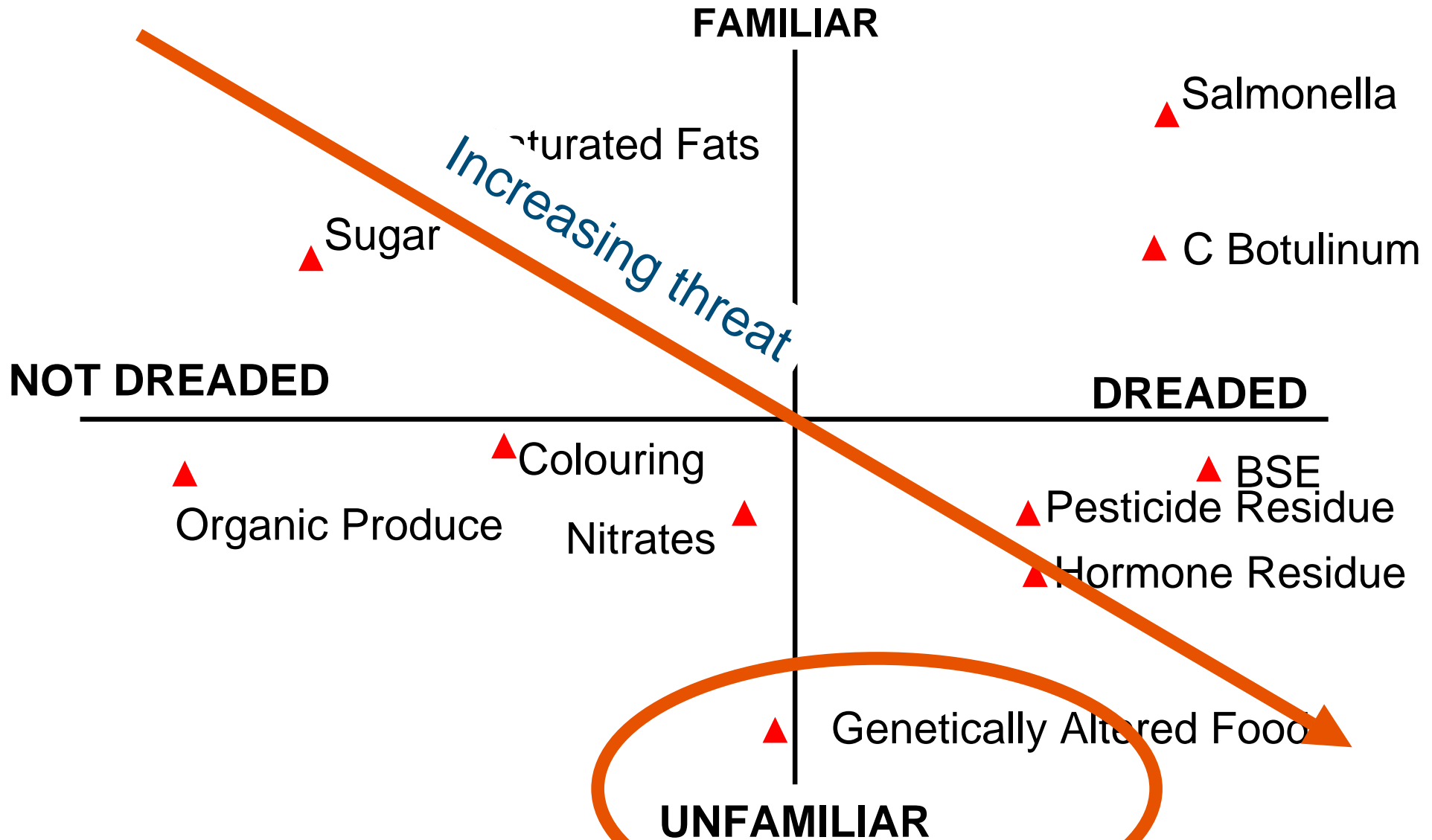


Risk Perception

- Why is the public not rational?
- The public may well be rational, but following a different rationale to experts



Consumer perceptions of food risks

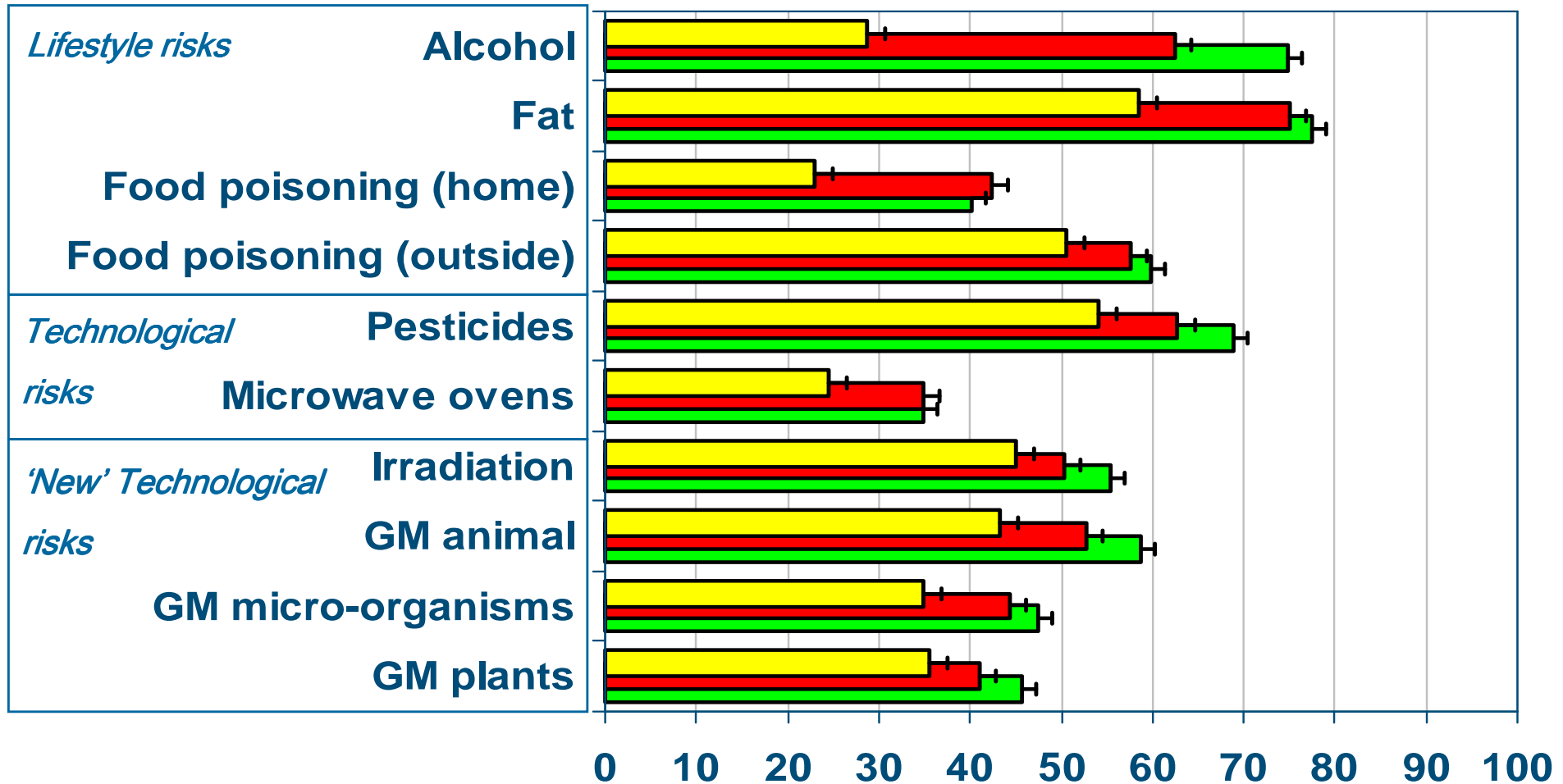


Barriers to successful risk communication

- The feeling that
 - I am taking fewer risks than a comparative other*
(optimistic bias)
 - I also have more knowledge and more control*
- Habitual behaviour, (where an individual behaves in a set pattern *without conscious deliberation*).
- These effects are most prominent in frequently repeated behaviour (Fischer & De Vries, submitted)



Optimistic bias - Risk ratings



Frewer, Shepherd & Sparks (1994)

■ society
 ■ other people
 ■ personal



What went wrong with GMO's

- What was communicated
 - Substantial equivalence of GMO products
 - Short term estimates of potential risks
- What the consumers wanted to know
 - Consequences for environment
 - Long term estimates of risk (implies post-market surveillance)
 - Information about traceability and point of sale information



What went wrong with GMO's

- Misfit between Expert assessments and Consumer information needs
 - Important issues not taken into account
 - **Consumer values** such as concern about the integrity of nature
 - **Trust in the regulatory system** were an important part of societal and consumer acceptance
 - Developing communication about **substantial equivalence** did not address consumer concerns
 - The absence of 1st generation products with tangible and desirable **consumer benefits**



What went wrong with GMO's (2)

- ***Control over consumption*** of GM foods was important to European consumers, necessitating the labelling of GM foods and implementation of ***effective traceability systems***
- The negative public reaction to GM foods was *less* to do with risk, and *more* to do with consumer choice and provision of relevant information
- ***Marketing issue***, not an ***ideological*** issue (“*who wants what products and why?*”)
- ***Opaque*** risk analysis systems and decision-making practices were not helpful in reassuring the public

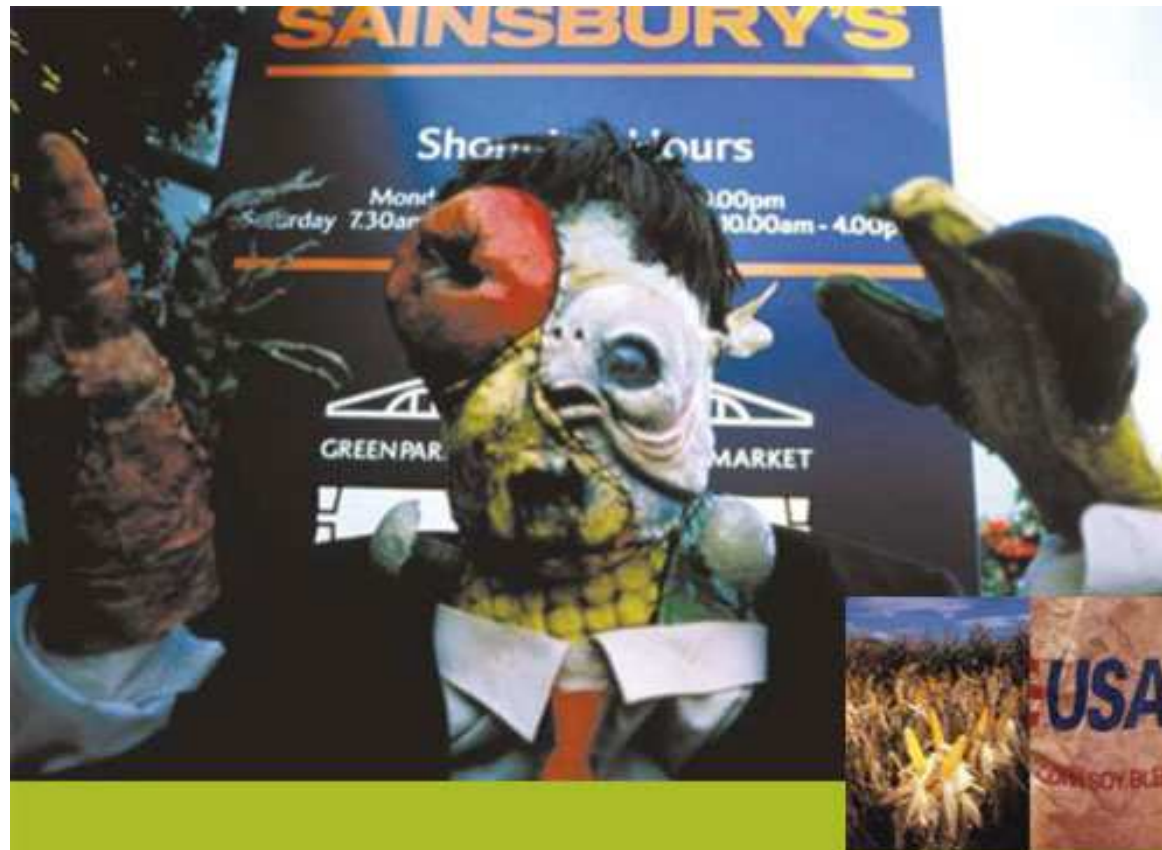


Recent development (8 February 2006)

- **WTO** preliminary judgement to overrule EU moratorium and import limitations.
 - EU could not prove GMO's are less safe
 - Interferes with current policy in which some products are being allowed, but under strict conditions.
 - May re-ignite the debate
 - friends of the Earth spokesperson says: 'The WTO undermines democracy and puts business interests before the welfare of the public.'
 - <http://www.bite-back.org/>



Some images of GMO's



would you feed this to your kids?

genetically modified food aid travels the globe | www.oxfords.com, www.monrovia.com



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Emerging issues

- Risks and Benefits
- Different consumers, different needs
- Perception of effective risk management



Risks and Benefits

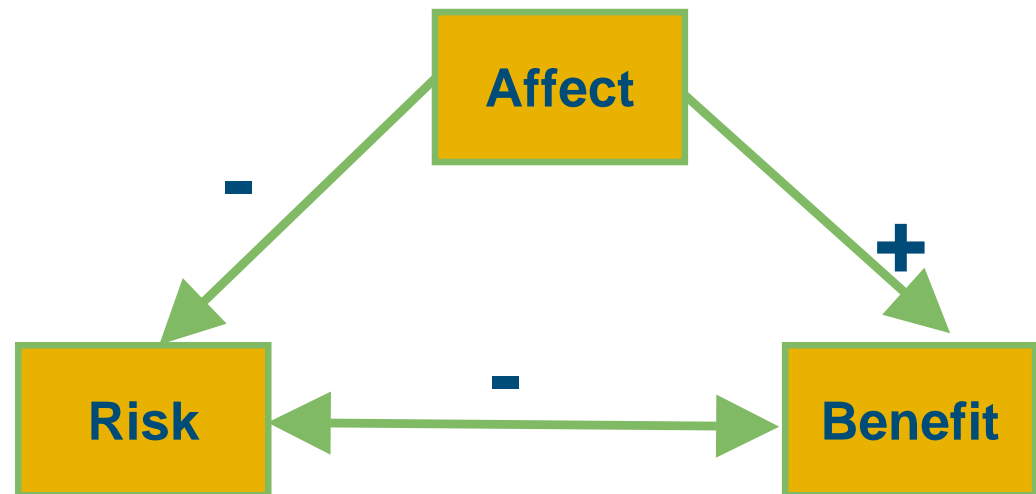
- Move towards analysis of Risk **and** Benefits
- Move towards integral analysis of multidimensional Risk (.... and benefits?)



Risks and Benefits

- Not only perceived risks, but also perceived benefits, are important in determining consumer acceptance
 - E.g. people engage in potentially hazardous practices (Barbecue: microbiology and carcinogens) are conducted because of perceived benefit (social rewards, pleasure)
- Risks and Benefits are often negatively correlated (Alhakami & Slovic, 1994), because of affect (Finucane et al 2000)

Affect as used here is an implicit association / implicit attitude.



Risks and Benefits

- How to handle ambiguous expert opinions
 - Example fish
 - Toxicologist: Eat not too much because of heavy metal
 - Nutritionists: Eat more fish because of Omega 3 fatty acids

..... So how to communicate ...

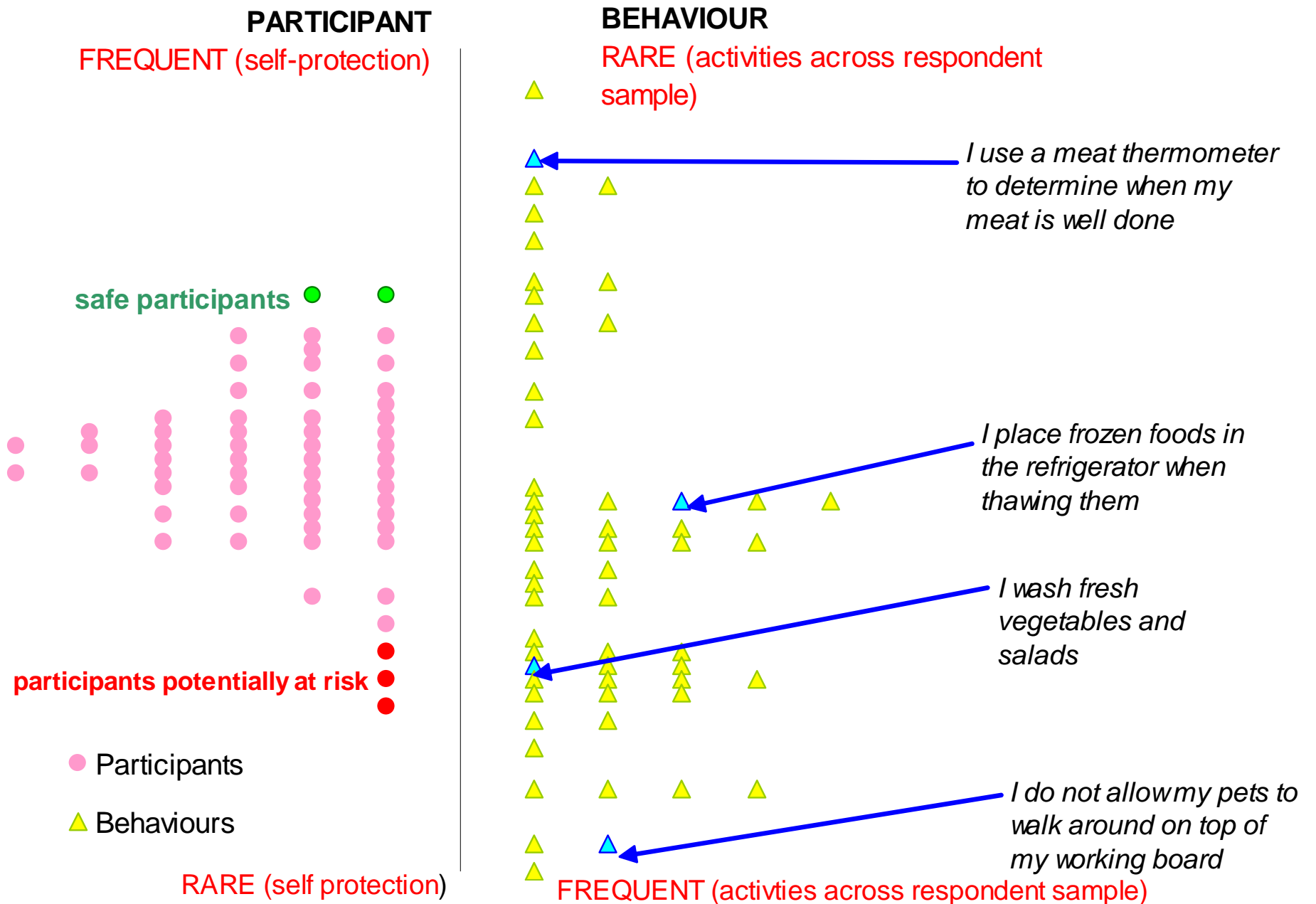


Different consumers, different needs

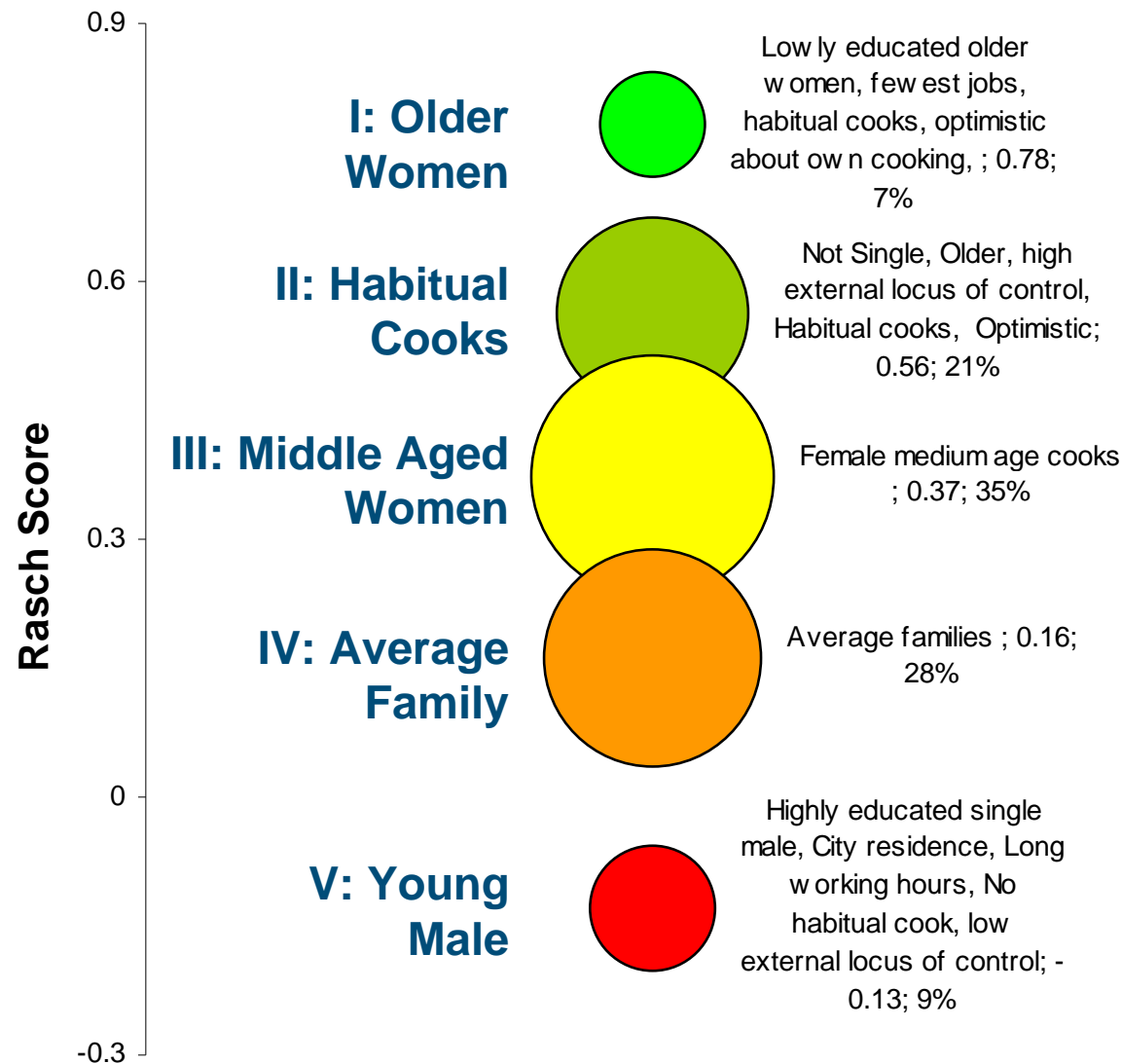
- Not all food handling practices are as easy to consumers.
- Easy practices are more easily communicated
- Not all consumers are likewise motivated
- Communicate easier practices to less motivated, more difficult only to more motivated consumers



Rasch scale of food handling practices



Types of Consumers

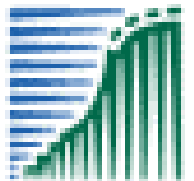
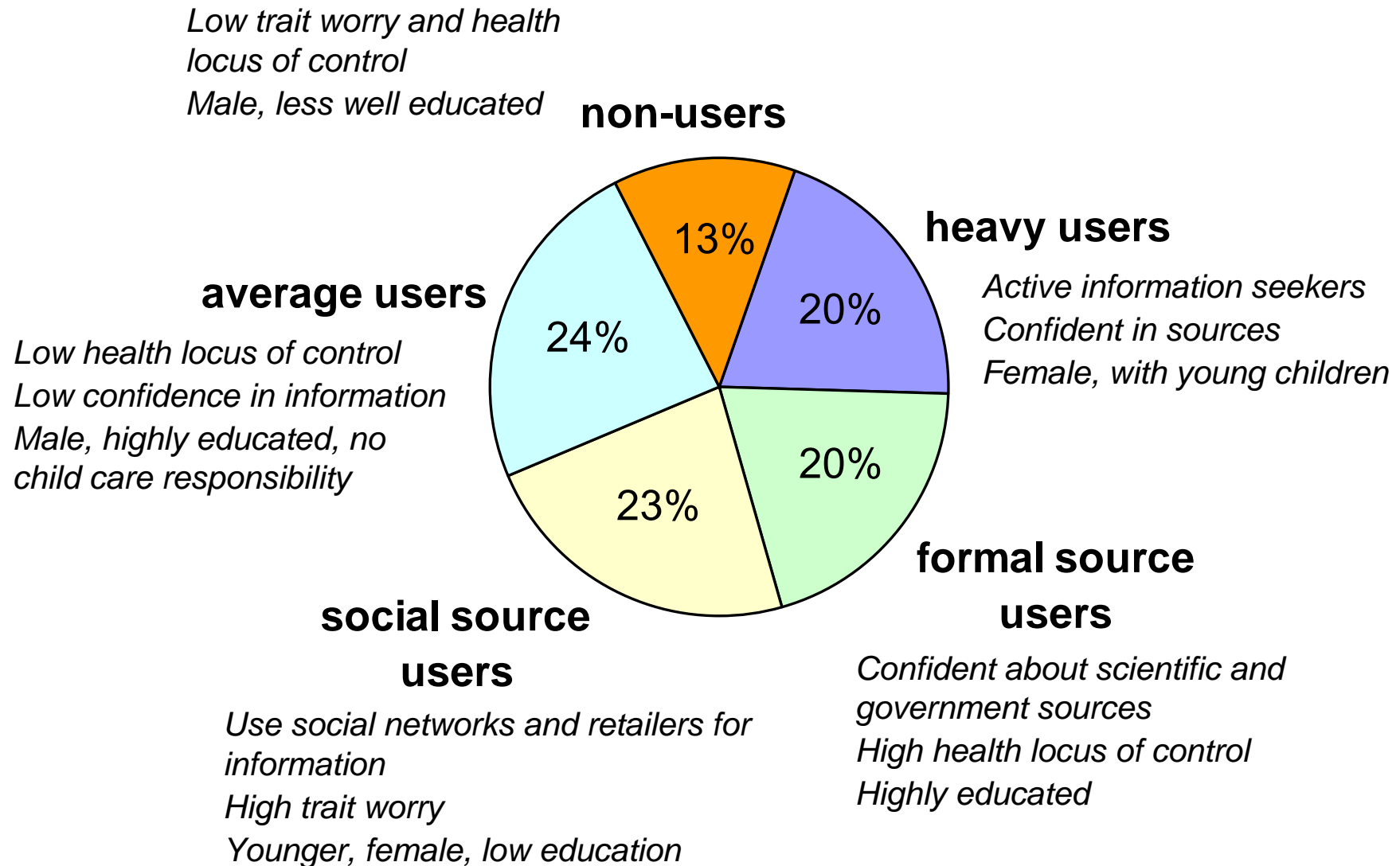


A Hierarchical Cluster Analysis indicated 5 clusters of consumers based on the distribution of Rasch scores

Significant differences in demographics and psychological factors were used to determine cluster description



Individual Differences in Use of Food Safety Information



Understanding Information Needs of Consumers

- Understanding of what consumers actually *do* and *don't do* in relation to risk and risk communication
 - Identify which consumers are most “at risk”
 - Design targeted information for consumer segments; i.e. consumers should be informed about appropriate changes in behaviour which are achievable
 - Address targeted consumers according to the most likely information adoption channel

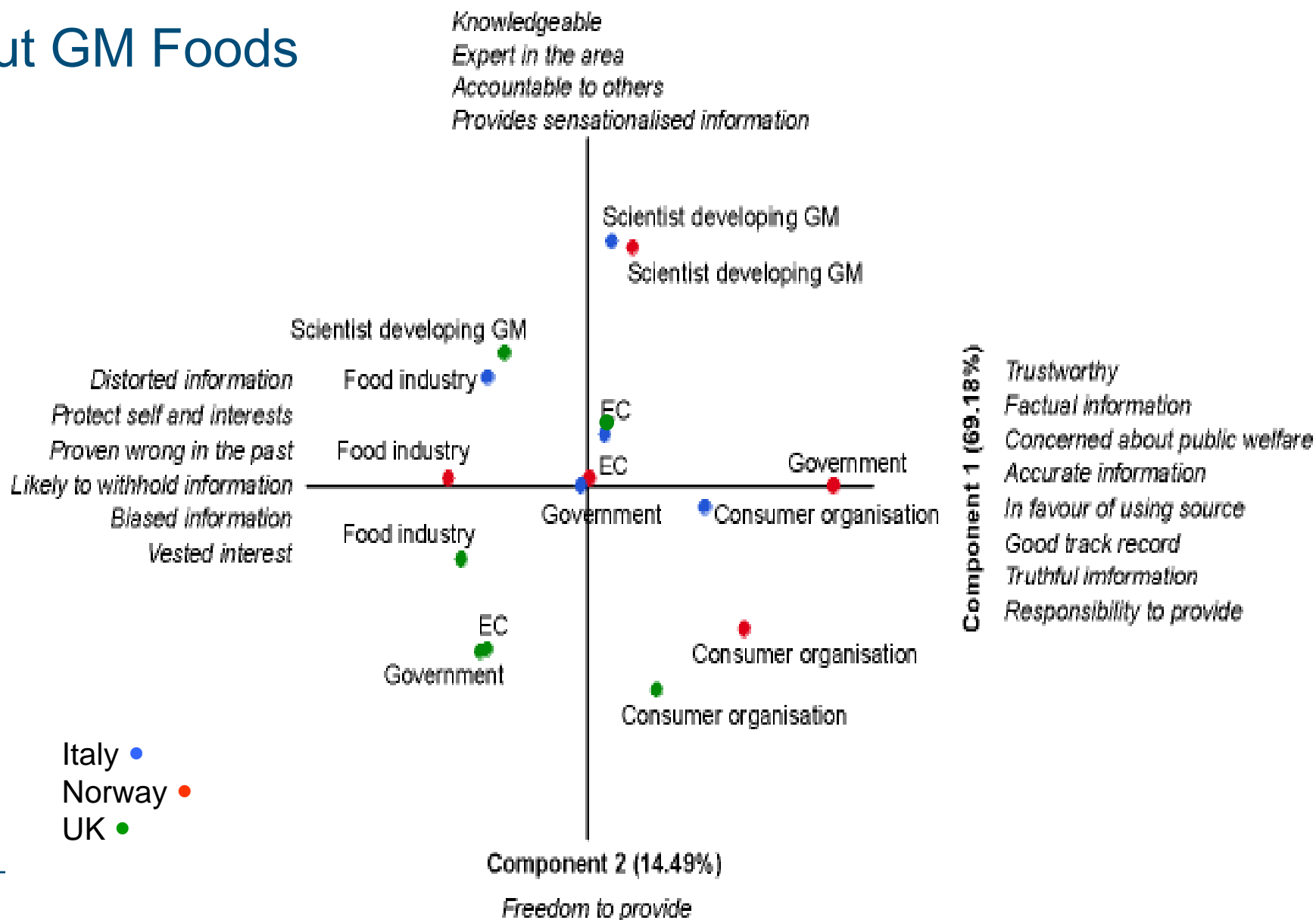
Perception of Risk Management

- (Regaining) Trust
- Traceability
- Developments of integrated approaches



Cross Cultural Differences – Trust in information Sources

about GM Foods



Monitoring Consumers' Confidence over Time

- What is confidence?
 - How does it change over time?
 - What drives consumer confidence in food safety?
 - What consequences might arise?
-
- A Monitor for Consumer Confidence in Food Safety

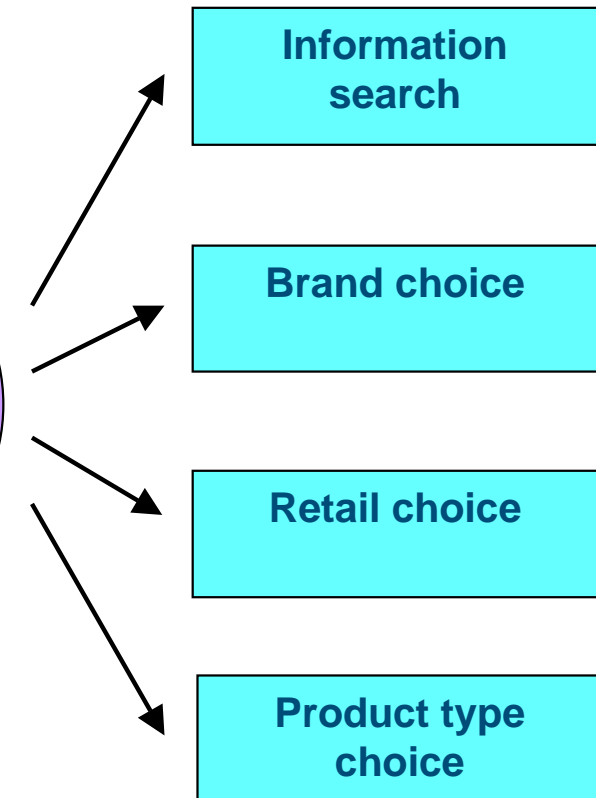


Conceptual model

DETERMINANTS OF CONFIDENCE



BEHAVIOURAL CONSEQUENCES



Traceability

- From fork to farm
- General Food Law, January 1, 2005 requires traceability
 - objectives: adequate recall and restoring consumer confidence
- Consumers learn about traceability by means of traceability information on food labels
- Traceability relevant for consumers
 - Genetically modified foods
 - Food allergies
 - Food safety
 - Food quality (e.g. European designated origin labels: PDO/PGI)

Trace project

- Consumer perceptions, needs and wants:
 - What understanding do consumers have of traceability?
 - What do consumers want traced in terms of food products? What information needs to be available and in what form should it be presented.
 - Do they perceive benefits from traceability?
 - Are they willing to pay for traceability systems?

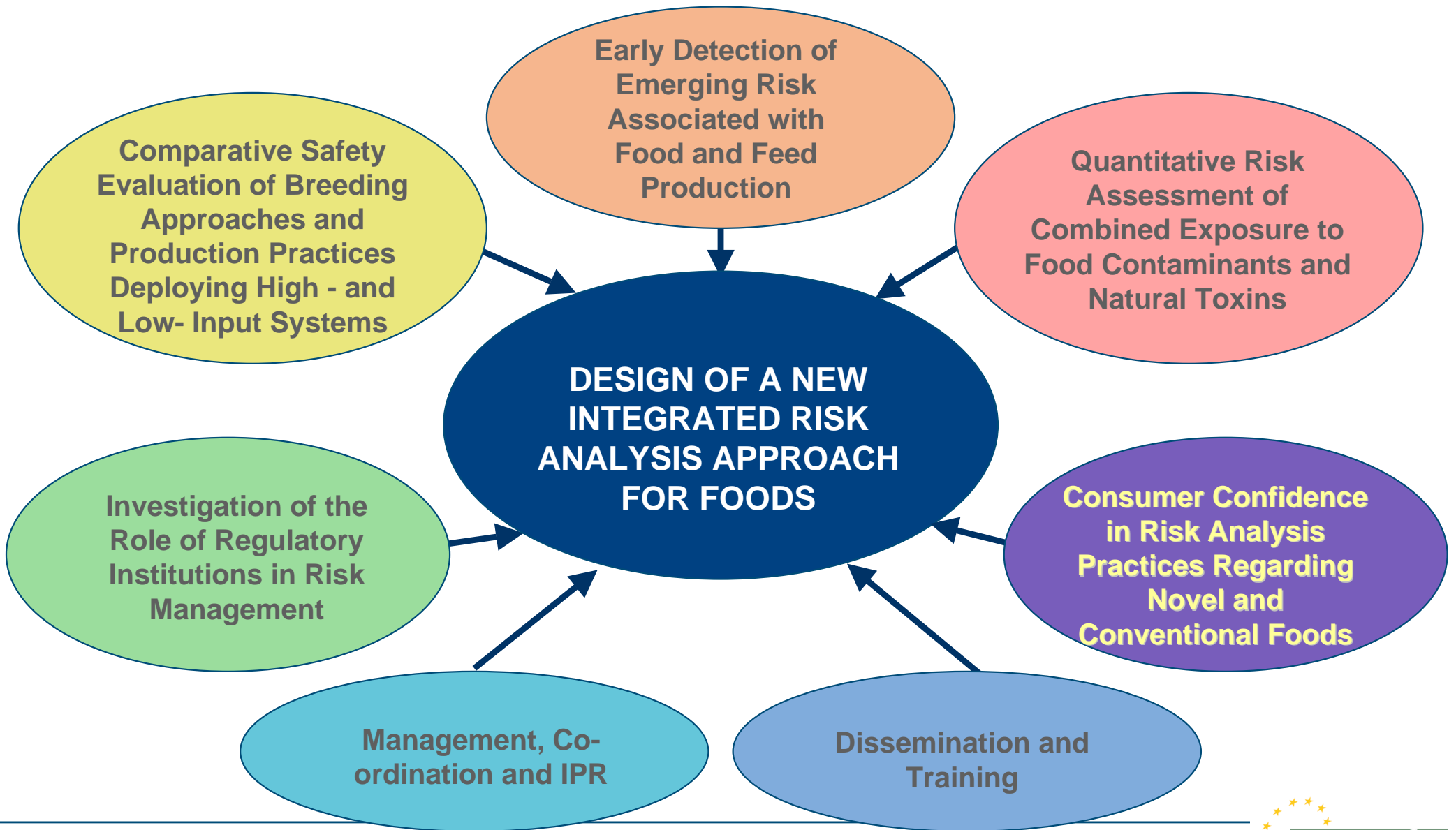
DEVELOPING INTEGRATED APPROACHES

Key factors influencing consumer perceptions of food risk management



(Van Kleef et al., 2005 - EU SAFE FOODS project, CT-2004-506446 WP4 social representation study)





Summary of main points

- Consumer rationale differs from expert rationale
- Consumer information needs go beyond technical estimates Communication should take account of:
 - Tangible consumer benefits
 - Difficulty of adoption of changed behaviour
 - Type of information
 - Questions of the public (even when seemingly not important)
- Risk management should aim at regaining trust
 - Transparent practices, traceability
 - Integrated approaches



Future research needs in Risk (Benefit) Communication

- Empirical studies on communication strategies
 - Both small scale and ecologically valid
- Development of code of best practice regarding risk-benefit communication with consumers
 - Focus on *uncertainty*, population level *variability*, and *individual differences* in information needs
 - Develop and test *targeted risk communication* strategies
 - Test INTERNATIONALLY
- Examine relations between *trust*, *confidence*, *improved traceability* and *transparency*
- Develop links with the *governance* and *public participation* research agenda



Interim Implications

■ For management

- Provide *proactive communication* about various factors inherent in risk management and risk assessment
- Incorporate the views and opinions of all stakeholders in the *process* of risk analysis

■ For communication

- Provide the *right* consumers with the *right* information through the *right* source

■ For RISK analysis

- Integrate consumer science and management science with risk assessment methodologies



Thank you

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